

# **Human Enhancement Technologies: Private Demand, Regulation Preferences, and Moral Concerns**

## **Abstract**

We study private demand and preferred governance for human enhancement technologies using a nationally representative survey experiment of U.S. adults (N=5,614). Respondents evaluate randomized vignettes varying benefit domain (cosmetic, health, productivity), mechanism (genetic vs. non-genetic biotechnology implant) and heritability, purpose (restorative vs. enhancing), and side-effect severity. Stated adoption is highest in health scenarios and lower in productivity and cosmetic ones; it falls sharply with severe side effects and enhancement framing, with an enhancement penalty comparable to the risk penalty. A sizable minority are never-adopters even when large benefits are offered, consistent with resistance that is not fully explained by standard consequentialist tradeoffs. Governance preferences diverge from private demand: desired regulation rises with risk and inheritable genetics, while productivity scenarios elicit elevated ethical concern without comparable support for stricter regulation. Support for outright prohibition remains low across conditions; concerns are expressed mainly through preferences for regulated access, suggesting that personal unwillingness to adopt does not necessarily imply support for prohibiting others from doing so. The results show that private demand is an incomplete guide to the socially preferred governance of emerging technologies, and that regulation can help steer technological change toward trajectories that attract broader social acceptance.

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